PROPOSAL EVALUATION

Proposition 84 Integrated Regional Water Management (IRWM) Grant Program

Implementation Grant, Round 1, FY 2010-2011

Applicant	Semitropic Water Storage District	**Amount Requested**	$12,892,510
Proposal Title	Poso Creek IRWMP Implementation Grant Proposal	**Total Proposal Cost**	$19,298,247

PROPOSAL SUMMARY

The proposal addresses the primary and secondary objectives of the Poso Creek IRWM Plan by providing integration of regional water conveyance systems with interties, promoting water conservation and addressing water quality problems faced by disadvantaged communities. The proposal consists of eight projects: (1) Cross Valley Canal to Calloway Canal Intertie, (2) Madera Avenue Intertie, (3) Habitat Improvements on Pond-Poso and Turnipseed Spreading Basin, (4) On-Farm Mobile Lab, Water Use Efficiency Services, (5) DAC Fund for Feasibility-Level Studies and Well Destruction Program, (6) Consolidation of Bishop Acres into City of Shafter Water Supply System, (7) North Shafter Sewer Hook-up Reimbursement Fund, and (8) Meter Installation in Disadvantaged Community Service Area.

PROPOSAL SCORE

Criteria	Score/Total Possible	Criteria	Score/Total Possible
Work Plan	**9/15**	Economic Analysis – Water Supply Costs and Benefits	**12/15**
Budget	**5/5**	Water Quality and Other Expected Benefits	**6/15**
Schedule	**5/5**	Economic Analysis – Flood Damage Reduction	**3/15**
Monitoring, Assessment, and Performance	**5/5**	Program Preferences	**10/10**
		Total Score (max. possible = 85)	**55**

EVALUATION SUMMARY

The following is a review summary of the proposal.

Work Plan

The criterion is less than fully addressed, lacking sufficient supporting documentation, and missing logical rationale. There is no narrative discussion of the construction activities listed in the "Tasks" section of the work plan. However, a section titled "Project Abstract" presents a brief description of the construction activities. The work plan includes the goals and objectives of the Proposal and how it relates to the adopted IRWM Plan; a table presenting an overview of the projects and their status; a map showing relative project locations; and a discussion of the synergies or linkages among projects.

Budget

The criterion is fully addressed and supported by thorough and well-presented documentation and logical rationale. A summary Budget and detailed Budgets for each project is contained in the Proposal. The items in the Budget agree with the items in the Work Plan and Schedule; and the detailed costs for each project appear to be reasonable. Basis of the costs in the Budget are explained and sufficiently supported.

Schedule

The criterion is fully addressed and supported by thorough and well-presented documentation and logical rationale. The Schedule corresponds to the tasks described in the Work Plan; the schedule is reasonable, and demonstrates a readiness to begin construction of several projects within six months of anticipated award date.

Monitoring, Assessment, and Performance Measures

The criterion is fully addressed and supported by thorough and well-presented documentation and logical rationale. Monitoring, Assessment, and Performance Measures are consistent with the Basin Plan. The output indicators will effectively track output, are adequate to evaluate change resulting from the work, and are feasible with regard to meeting the targets within the life of the Proposal.

Economic Analysis – Water Supply Costs and Benefits

High levels of water supply benefits relative to costs can be realized through this proposal, and the quality of the analysis and supporting documentation demonstrate these benefits. Generally the applicant provided a good explanation of costs. The major water supply benefits are for the two canal intertie projects. These would allow groundwater recharge and improved operations within the districts, and would provide significant benefits if 1) water acquisition is truly the most likely alternative water source; and 2) the water used for recharge would not otherwise have been used within the basin. Benefits are substantially greater than total proposal cost. However, supporting documentation does not clearly demonstrate where the available water would be recharged in the absence of the proposed projects.

Two projects provide all of the quantified water supply benefits. Six smaller projects are described qualitatively.

Cross Valley Canal (CVC) to Calloway Canal Intertie project would construct a bi-directional intertie canal between the CVC and Calloway Canal in North Kern Water Supply District (NKWSD). Present value (PV) of cost is $13.7 million. Capital cost matches the value shown in Table 7. Quantitative benefits are based on providing additional 5,700 acre feet (AF) on average per year of State Water Project (SWP) water into NKWSD for groundwater recharge. Unit benefit is estimated to be $300/AF based on a review of recent water transactions in the region. Reviewer believes that dollar value is plausible if the users of that water would in fact have to purchase other water on the open market. Claimed PV of benefit is $22.3 million. Secondary economic impacts from water shortage and revenue from water sales are discussed but are not included in quantified benefits.

Madera Avenue Intertie project would construct a bi-directional intertie between Semitropic WSD and Shafter – Wasco ID. PV of cost is $7.6 million. Project would convey Friant water by gravity to Semitropic WSD for groundwater storage, and convey back by pump to SWID. Capital cost matches the value shown in Table 7. Quantitative benefits are based on providing an average of 2,500 AF of Friant water per year to Semitropic WSD for in-lieu storage in the groundwater bank, and then pumping an average of 2,500 AF per year back into SWID for dry year supply. Unit benefit is estimated to be $300/AF based on a review of

recent water transactions in the region. Reviewer believes that dollar value is reasonable if the users of that water would in fact have to purchase other water on the open market. Claimed PV of benefit is $9.2 million. Secondary economic impacts from water shortage are discussed but are not included in quantified benefits.

Water Supply Benefits for the other projects are described. Costs are shown in 2009 dollars, and capital costs match those shown in Attachment 4. Water supply benefits would accrue primarily from Project 4 (Mobile Lab services to improve agricultural water use efficiency), Project 5 (feasibility studies for water supply reliability), Project 6 (Bishop Acres water supply hookup), and Project 8 (Shafter water meter installation).

Water Quality and Other Expected Benefits

Only below average levels water quality and other benefits relative to costs can be realized through this proposal, as demonstrated by the analysis and supporting documentation. Water quality and environmental benefits are quantified for a couple of the smaller projects, but these represent a small fraction of the proposal cost. Avoided pumping costs and treatment cost savings are quantified for the two conjunctive use projects, but are also a small fraction of proposal cost.

Quantitative benefits from the CVC-Calloway Intertie include: treatment cost savings based on providing an additional 25,000 AF to Improvement District No. 4 of the Kern County Water Agency (ID4) at a savings of $3.33/AF, or $1.09 million PV; pumping cost savings from avoiding the use of existing pumped diversions, at PV of $6.74 million. Greenhouse gas reductions and other system flexibility benefits are described but not monetized.

Quantitative benefits the Madera Avenue Intertie are pumping cost savings from improved recharge and recovery operations, at PV of $2.13 million. Greenhouse gas reductions, possible water quality improvements, and other system flexibility benefits are described.

Water quality and other benefits from the smaller projects accrue primarily from Project 3 (environmental enhancement), Project 5 (reduced percolation and fertilizer leaching), Project 5 (destruction of wells causing groundwater contamination), Project 6 (improved drinking water quality and reduced operation and maintenance {O&M} cost), and Project 7 (reducing groundwater pollution from septic tanks). Wildlife habitat improvement from Project 3 and the destruction of unused wells are the likely the most significant benefits in this category. These are all adequately described.

Economic Analysis – Flood Damage Reduction (FDR)

Only low levels of flood damage reduction benefits relative to costs can be realized through this proposal, as demonstrated by the analysis and supporting documentation. Quantified FDR benefits are claimed, but are not well supported by hydrologic analysis and did not use damage costs that are appropriate for the time of year likely to be affected by flooding.

FDR benefits are described for the CVC-Calloway Canal Intertie project based on recent flooding events. The quantitative analysis calculates reduction in inundated acres based on project-diverted water. The calculation of avoided acres inundated by the project is unclear, but does not appear to be based on an existing hydrologic study. The value of annual crops damaged is based on a drought impact study. Reviewer notes that floods nearly always occur in winter when row crops are not planted, so a drought impact analysis is not an appropriate value to use. Reviewer removed quantitative FDR benefits and treated the analysis as qualitative only.

Program Preferences

The criterion is fully addressed and the applicant thoroughly documents the breadth and magnitude of the program preferences to be implemented including addressing the critical water supply or water quality needs of a Disadvantaged Community (DAC) within the region. Other claimed program preferences are: Include regional projects or programs, effectively integrate water management programs and projects within hydrologic region, Drought Preparedness, Use and Reuse Water More Efficiently, Climate Change Response Actions, Expand Environmental Stewardship, Practice Integrated Flood Management, Protect Surface Water and Groundwater Quality, and Ensure Equitable Distribution of Benefits.